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DR 6/11-135A and 135EC 1×N Frequency Diversity Operation and Maintenance Annual Tests

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1 Introduction

These are tests that must be performed annually for DR 6/11-135 to meet Performance Objectives and Federal Communications Commission (FCC) Compliance as determined by Radio Technical Support.

In Table A, those tests marked with an asterisk are not required, but these tests are recommended by Radio Technical Support. They provide an additional test for marginal operation and they check performance of adaptive circuits that compensate for fade-related distortion.

2 Scheduling Tests

Many of the tests must be done with the radio channel under test removed from service. During those tests, the protection channel will not be available to protect other service on the route. To reduce the possibility of service outages, schedule these tests for times when propagation conditions are expected to be stable. Consult with your supervisor and Technical Support Group (TSG) personnel for the best times for these tests.

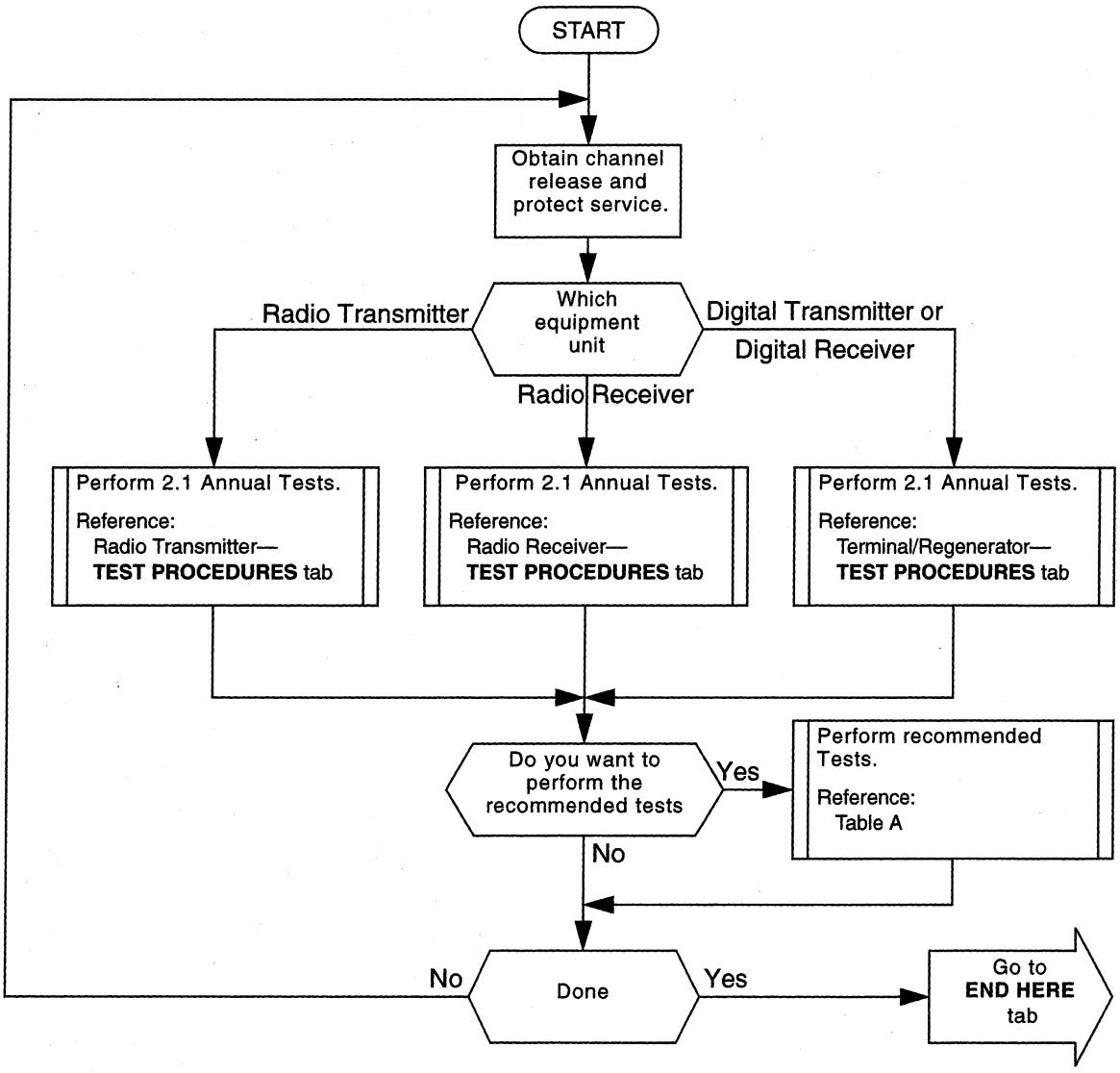
3 Annual Tests

Each **TEST PROCEDURES** tab has an annual tests flowchart for the required FCC compliance tests and system performance tests associated with the equipment unit. Flowchart 1. Annual Tests—System will refer you to the different annual tests flowchart for each equipment unit. You will be sent to the **END HERE** tab after you have completed the tests.

If a trouble is found during the annual tests, the test procedures will direct you through the isolation and repair. After repair, you need to return to the appropriate annual tests flowchart.

Prerequisites:

- No equipment alarms.
- Performance is good per TMAS.



Flowchart 1. Annual Tests—System

Table A. DMR 6/11 Annual Tests

Unit	Test	Reference
Radio Transmitter	ALC Voltage Check (Verifies RF output power.)	Radio Transmitter— **TEST PROCEDURES** tab, 2.1 Annual Tests
	MWV GEN Frequency Check	
	TWT Helix and Beam Current (if equipped with a TWT) *	Radio Transmitter— **TEST PROCEDURES** tab, 4.1 Helix and Beam Current (TWT)
Radio Receiver	MWV GEN Frequency Check	Radio Receiver— **TEST PROCEDURES** tab, 2.1 Annual Tests
	IF Combiner Performance Check (if equipped)	
Terminal Transmitter	Frame Generator Clock Freq. Check	Terminal/Regenerator— **TEST PROCEDURES** tab, 2.1 Annual Tests
	Modulator Carrier Freq. Check	
Regenerator Transmitter	Frame Resupply Clock Freq. Check	
	Modulator Carrier Freq. Check	
Terminal Receiver	Blue Signal Generator Clock Freq. Check (if equipped)	
	Over-the-Air S/I Stress Check †	
	Over-the-Air Propagation Distortion Checks *	Terminal/Regenerator— **TEST PROCEDURES** tab, 5.2 Over-the-Air Propagation Distortion Checks
Regenerator Receiver	Over-the-Air S/I Stress Check †	Terminal/Regenerator— **TEST PROCEDURES** tab, 2.1 Annual Tests
	Over-the-Air Propagation Distortion Checks *	Terminal/Regenerator— **TEST PROCEDURES** tab, 5.2 Over-the-Air Propagation Distortion Checks

* Recommended by Radio Technical Support.

†Per agreement with FCC, an annual check of S/I = 10^{-8} BER over a hop is a satisfactory means of checking compliance with the FCC MASK REQUIREMENTS.